

Sent Via Facsimile Transmission 571.273.8300

PATENT
18061 (AT 20958-2114)

IN THE CLAIMS

1. (previously presented) A modular receptacle jack comprising:

a housing comprising a jack interface and an exterior surface;

a shield extending over at least a portion of said exterior surface, said shield comprising an interior face, an exterior face, signal conductors extending between said interior face and said exterior face, and a ground plane; and

a plurality of magnetic components coupled to one of said interior face and said exterior face, each of said magnetic components directly grounded to said ground plane of said shield, thereby avoiding common impedance coupling of said contacts and suppressing EMI/RFI in incoming and outgoing signals transmitted through the signal conductors of said shield.

2. (original) A modular receptacle jack in accordance with claim 1 wherein said receptacle jack is an RJ-45 jack.

3. (original) A modular receptacle jack in accordance with claim 1 wherein at least some of said magnetic components comprise transformer elements.

4. (original) A modular receptacle jack in accordance with claim 1 wherein at least some of said magnetic components comprise capacitors.

5. (original) A modular receptacle jack in accordance with claim 1 wherein said shield comprises a printed circuit board.

6. (previously presented) A modular receptacle jack in accordance with claim 1 wherein said shield comprises a circuit board having a plurality of layers, one of said layers being said ground plane.

Sent Via Facsimile Transmission 571.273.8300

PATENT
18061 (AT 20958-2114)

7. (original) A modular receptacle jack in accordance with claim 1 further comprising a conductive shell surrounding at least a portion of said jack, said shield coupled to said conductive shell.

8. (previously presented) A modular receptacle jack, comprising:

a housing comprising a jack receptacle and a plurality of signal contacts within said receptacle; and

a shield extending over an outer surface of said housing, said shield comprising a printed circuit board having a ground plane and a plurality of magnetic components coupled to a surface of said printed circuit board and directly grounded to said ground plane, wherein EMI transmission is suppressed as signals pass from the signal contacts within the housing to an external space and as signals pass from the external space to the signal contacts.

9. (original) A modular receptacle jack in accordance with claim 8 wherein said shield comprises opposite surfaces, and a conductive path extending from one of said surfaces to the other of said surfaces of said printed circuit board.

10. (original) A modular receptacle jack in accordance with claim 8 wherein said contacts are electrically coupled to an inner surface of said printed circuit board.

11. (original) A modular receptacle jack in accordance with claim 8 wherein said contacts are arranged in differential pairs.

12. (original) A modular receptacle jack in accordance with claim 1 wherein said receptacle jack is an RJ-45 jack.

13. (previously presented) A modular receptacle jack comprising:

Sent Via Facsimile Transmission 571.273.8300

PATENT
18061 (AT 20958-2114)

a housing comprising a jack receptacle and a plurality of signal contacts within said receptacle; and

a shield extending over an outer surface of said housing, said shield comprising a circuit board having at least one aperture therethrough for passage of a signal conductor, and at least one magnetic component coupled to a surface of said printed circuit board adjacent said aperture, said shield further comprising a ground plane and said at least one magnetic component directly connected to said ground plane for suppressing EMI transmission therethrough, thereby providing clean bi-directional communication through said signal contacts while avoiding common impedance coupling of said signal contacts.

14. (original) A modular receptacle jack in accordance with claim 13 wherein said shield comprises opposite surfaces, said signal conductor extending from one of said surfaces to the other of said surfaces of said printed circuit board.

15. (original) A modular receptacle jack in accordance with claim 13 wherein said shield comprises a plurality of apertures and signal conductors corresponding to each of said signal contacts, each of said signal contacts electrically coupled to one of said signal conductors.

16. (original) A modular receptacle jack in accordance with claim 15 further comprising a plurality of magnetic components coupled to a surface of said shield, said magnetic components suppressing EMI/RFI transmission through each of said plurality of signal conductors.

17. (original) A modular receptacle jack in accordance with claim 15 wherein said contacts are arranged in differential pairs.

18. (original) A modular receptacle jack in accordance with claim 15 wherein said receptacle jack is an RJ-45 jack.

Sent Via Facsimile Transmission 571.273.8300

PATENT
18061 (AT 20958-2114)

19. (original) A modular jack in accordance with claim 15 further comprising a conductive shell surrounding a portion of said housing, said shield coupled to said conductive shell.

20. (original) A modular jack in accordance with claim 15 further comprising a conductive shell surrounding a portion of said housing, said shell having ground fingers electrically contacting said shield.